

TECHNICAL AMENDMENTS TO THE CLAIMS:

Please cancel Claims 4-6, 11-18 and 36-38 without disclaimer or prejudice to Applicant's right to pursue the subject matter of these claims in future divisional or continuation applications.

Please amend Claims 7-10, 19, 21, 27, 31, 32, 35, 39, 40 and 42 as follows:

1. (Cancelled)
2. (Cancelled)
3. (Cancelled)
4. (Cancelled)
5. (Cancelled)
6. (Cancelled)
7. (Currently amended) ~~The~~ An isolated nucleic acid fragment ~~of Claim 4,~~ encoding an antifungal polypeptide comprising the polypeptide sequence of general formula (II) below:

Xaa'-Val-Cys-Arg-Xab'-Ile-Cys-Arg-Xac'-Gly-Cys-Tyr-Xad'-Lys-Cys-Thr-Xae' (SEQ ID NO:16)

(II)

wherein:

~~Xaa represents the peptide sequence Xaa'-Val,~~ wherein Xaa' represents NH₂ or a peptide residue comprising at least one amino acid, and/or

~~Xab represents the peptide sequence Arg-Xab'-Ile,~~ wherein Xab' represents a peptide residue of three amino acids and/or

~~Xac represents the peptide sequence Arg-Xac'-Gly,~~ wherein Xac' represents a peptide

residue of three amino acids and/or

~~Xad represents the peptide sequence Tyr-Xad'-Lys, wherein Xad' represents a peptide residue of~~

one amino acid, and/or

~~Xae represents the peptide sequence Thr-Xae', wherein Xae' represents COOH or a peptide residue~~

comprising at least one amino acid.

8. (Currently amended) The nucleic acid fragment of Claim 7, wherein Xaa' represents the peptide sequence -Arg-Ser-, and/or Xab' represents the peptide sequence -Gln-Ile-Lys-, and/or Xac' represents the peptide sequence -Arg-Arg-Gly-, and/or Xad' represents the peptide residue -Tyr-, and/or Xae' represents the peptide sequence -Asn-Arg-Pro-Tyr (SEQ ID NO:17).

9. (Currently amended) ~~The~~ An isolated nucleic acid fragment encoding a protein comprising the nucleic acids encoding the peptide sequence of SEQ ID NO:2 or homologous peptide sequences an isolated nucleic acid fragment complementary to a nucleic acid fragment encoding a protein comprising SEQ ID NO:2.

10. (Currently amended) The nucleic acid fragment of Claim 9, wherein the nucleic acid fragment comprises ~~comprising the nucleic acid sequence of SEQ ID NO:1, a nucleic acid sequence homologous to SEQ ID NO:1, or a nucleic acid sequence complementary to SEQ ID NO:1.~~

11. (Cancelled)

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (Cancelled)

16. (Cancelled)
17. (Cancelled)
18. (Cancelled)
19. (Currently amended) A chimeric gene comprising a nucleic acid ~~sequence~~ fragment according to any one of Claims 4 to 10 7 or 8 operably linked to heterologous regulatory elements that are functional in a host organism.
20. (Previously amended) The chimeric gene of Claim 19, wherein the host organism is selected from the group consisting of a bacterium, an *E. coli* bacterium, a yeast, a yeast of the genera *Saccharomyces*, a yeast of the genera *Kluyveromyces*, a yeast of the genera *Pichia*, a fungus, an *Aspergillus* fungus, a plant cell, and a plant.
21. (Currently amended) The chimeric gene of Claim 19 further comprising a gene encoding a selectable marker ~~adapted~~ suitable for the transformation of said host organism operably linked to a heterologous regulatory element that is functional in a host organism.
22. (Previously amended) A vector comprising the chimeric gene of Claim 19.
23. (Previously amended) A method for transforming a host organism comprising incorporating the chimeric gene of Claim 19 into the genome of said host organism.
24. (Previously amended) The method of Claim 23, wherein the chimeric gene is incorporated into the genome of the host organism by means of a vector.
25. (Previously amended) The method Claim 23, wherein the host organism is selected from the group consisting of a bacterium, an *E. coli* bacterium, a yeast, a yeast of the genera *Saccharomyces*, a yeast of the genera *Kluyveromyces*, a yeast of the genera *Pichia*, a fungus, an *Aspergillus* fungus, a plant cell, and a plant.

26. (Previously amended) The method of Claim 25, wherein the host organism is a plant cell.
27. (Currently amended) The method of Claim 26, wherein ~~a plant is regenerated from the plant cell~~ the method further comprises regenerating a plant from the plant cell.
28. (Previously amended) A host organism comprising the chimeric gene of Claim 19.
29. (Previously amended) The host organism of Claim 28, wherein the host organism is selected from the group consisting of a bacterium, an *E. coli* bacterium, a yeast, a yeast of the genera *Saccharomyces*, a yeast of the genera *Kluyveromyces*, a yeast of the genera *Pichia*, a fungus, an *Aspergillus* fungus, a plant cell, and a plant.
30. (Previously amended) The host organism of Claim 29, wherein the host organism is a plant.
31. (Currently amended) A transgenic plant ~~The host organism of Claim 30, wherein said host organism is~~ regenerated from a plant cell comprising the chimeric gene of Claim 19.
32. (Currently amended) A progeny ~~A plant comprising the chimeric gene of Claim 19 obtained from the cultivating and/or crossing of the host organism~~ transgenic plant of Claim 31, wherein the progeny comprises the chimeric gene.
33. (Previously amended) The plant of Claim 32, wherein the plant is selected from the group consisting of a corn plant, a wheat plant, a rapeseed plant, a soybean plant, a rice plant, a sugar cane plant, a beetroot plant, a tobacco plant and a cotton plant.
34. (Cancelled)
35. (Currently amended) Seeds from the transgenic plants of Claim 32, wherein the seeds comprise the chimeric gene ~~of Claim 19.~~
36. (Cancelled)
37. (Cancelled)
38. (Cancelled)

39. (Currently amended) A method for preparing an antifungal peptide encoded by the chimeric gene of Claim 19, wherein the method comprises: the product of the chimeric gene of Claim 19 comprising the steps of cultivating the a host organism transgenic for the chimeric gene of Claim 28 in an appropriate cultivation environment; extracting the antifungal peptide produced by product of said chimeric gene; and partially or totally purifying the antifungal peptide produced by product of said chimeric gene.
40. (Currently amended) Seeds from the transgenic plants of Claim 332, wherein the seeds comprise the chimeric gene of Claim 19.
41. (Previously added) The vector of Claim 22, wherein the vector is selected from the group consisting of a plasmid, a cosmid, a bacteriophage or a virus.
42. (Currently amended) The vector of Claim 41, wherein ~~the~~ said virus is a baculovirus.

Please add new Claims 43-62 as follows:

43. (New) A chimeric gene comprising a nucleic acid fragment according to any one of Claims 9 or 10 operably linked to heterologous regulatory elements that are functional in a host organism.
44. (New) The chimeric gene of Claim 43, wherein the host organism is selected from the group consisting of a bacterium, an *E. coli* bacterium, a yeast, a yeast of the genera *Saccharomyces*, a yeast of the genera *Kluyveromyces*, a yeast of the genera *Pichia*, a fungus, an *Aspergillus* fungus, a plant cell, and a plant.
45. (New) The chimeric gene of Claim 43 further comprising a gene encoding a selectable marker suitable for the transformation of said host organism operably linked to a heterologous regulatory element that is functional in a host organism.

46. (New) A vector comprising the chimeric gene of Claim 43.
47. (New) A method for transforming a host organism comprising incorporating the chimeric gene of Claim 43 into the genome of said host organism.
48. (New) The method of Claim 47, wherein the chimeric gene is incorporated into the genome of the host organism by means of a vector.
49. (New) The method Claim 47, wherein the host organism is selected from the group consisting of a bacterium, an *E. coli* bacterium, a yeast, a yeast of the genera *Saccharomyces*, a yeast of the genera *Kluyveromyces*, a yeast of the genera *Pichia*, a fungus, an *Aspergillus* fungus, a plant cell, and a plant.
50. (New) The method of Claim 49, wherein the host organism is a plant cell.
51. (New) The method of Claim 50, wherein the method further comprises regenerating a plant from the plant cell.
52. (New) A host organism comprising the chimeric gene of Claim 43.
53. (New) The host organism of Claim 52, wherein the host organism is selected from the group consisting of a bacterium, an *E. coli* bacterium, a yeast, a yeast of the genera *Saccharomyces*, a yeast of the genera *Kluyveromyces*, a yeast of the genera *Pichia*, a fungus, an *Aspergillus* fungus, a plant cell, and a plant.
54. (New) The host organism of Claim 53, wherein the host organism is a plant.
55. (New) A transgenic plant regenerated from a plant cell comprising the chimeric gene of Claim 43.
56. (New) A progeny of the transgenic plant of Claim 55, wherein the progeny comprises the chimeric gene.
57. (New) The plant of Claim 56, wherein the plant is selected from the group consisting of a

corn plant, a wheat plant, a rapeseed plant, a soybean plant, a rice plant, a sugar cane plant, a beetroot plant, a tobacco plant and a cotton plant.

58. (New) Seeds from the transgenic plant of Claim 56, wherein the seeds comprise the chimeric gene.
59. (New) A method for preparing an antifungal peptide encoded by the chimeric gene of Claim 43, wherein the method comprises: cultivating a host organism transgenic for the chimeric gene in an appropriate cultivation environment; extracting the antifungal peptide produced by said chimeric gene; and partially or totally purifying the antifungal peptide produced by said chimeric gene.
60. (New) Seeds from the transgenic plant of Claim 57, wherein the seeds comprise the chimeric gene.
61. (New) The vector of Claim 46, wherein the vector is selected from the group consisting of a plasmid, a cosmid, a bacteriophage or a virus.
62. (New) The vector of Claim 61, wherein said virus is a baculovirus.